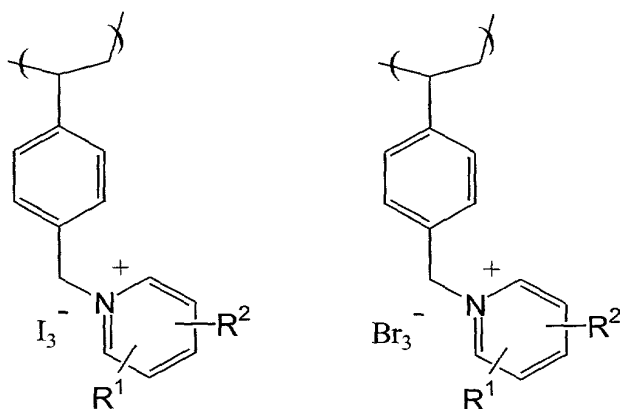


ABSTRACT OF THE DISCLOSURE

A water-insoluble polymeric oxidizing medium is contemplated that has a plurality of polymerized N-pyridinium vinylbenzyl triiodide or tribromide moieties whose pyridinium rings bear two substituents, R^1 and R^2 , that are independently a hydrido or a C_1 - C_4 alkyl group, and correspond in structure to the formula



A process for preparing aseptic water and an apparatus useful for carrying out that process, both of which utilize a contemplated polymeric oxidizing medium are disclosed, as are processes for oxidizing trivalent arsenic or antimony to pentavalent arsenic or antimony and for removing arsenic from water. Alumina particles containing meta-periodate, iron or manganese are also disclosed that can be used to sorb pentavalent arsenic and antimony, as well as cobalt and mercury.